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ABSTRACT

The agenda setting hypothesis of mass media effects, which maintains that the mass media set the agenda of public discussion and determine which items are to be discussed and which ignored, was tested. Agenda was defined as an attribute of individual respondents to be compared with those of various media. In a preliminary study, a group of 59 undergraduates completed a questionnaire ranking the importance of six broad news areas and providing information about media use. In the major study, 421 adults were interviewed in June 1972, and of these, 227 were reinterviewed in October 1972. At both times, respondents were asked to assess the salience of a set of six major issues and to respond concerning their media use; content analysis of media coverage was also performed. Results indicated no transfer of media agenda to personal agendas of media users, people exposed to specific media did not have personal agendas more in line with those of the media than did those persons not exposed to those media, and measures of use of newspapers and television for news and measures of exposure to these media did not correlate with measures of agenda fit. (DF)

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Individual Effects of Agenda-Setting

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The Agenda-Setting Hypothesis

The formulation of the agenda-setting hypothesis of mass media influence by McCombs and Shaw in 1972 sparked a proliferation of activity, the likes of which have been seen rarely in the short history of communication research.[1] Their explication and testing of the hypothesis, of course, was built on earlier descriptive studies, most notably the 1963 study by Bernard Cohen. It contained the popular definition of the agenda-setting hypothesis which is still widely quoted: "The press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about."[2]

Within a surprisingly short time, the agenda-setting hypothesis was picked up in the popular press. Theodore H. White, for example, recast the hypothesis in his flowery rhetoric to describe the media role in the 1972 presidential campaign:

> The power of the press in America is a primordial one. It sets the agenda of public discussion; and this sweeping political power is unrestrained by any law. It determines what people will talk and think about--an authority that in other nations is reserved for tyrants, priests, parties and mandarins.[3]

The major influence of the hypothesis, however, was in communication research which was clearly ready for a new approach to the study of mass media effects. As Steven H. Chaffee put it at the 1978 AEJ convention, the McCombs and Shaw piece set the agenda of the Theory and Methodology Division for at least five years. Research refining and expanding the original hypothesis grew rapidly and continues to proliferate. Agenda-setting has

produced, McCombs said recently, both supporters and opponents who approach the topic with an almost religious fervor. The first book-length study based on the hypothesis, a panel study in Charlotte, N.C., of the 1972 presidential election, lists at least 50 studies which were either derived from the original agenda-setting article or directly pertinent to it.[4] One can only speculate on how the number has increased in the two or three years since that bibliography was compiled.

There are several reasons why the agenda-setting hypothesis should have been so popular with researchers. Surely the most important is the scarcity of truly creative ideas about the effects of mass media. The mass effects model, which was popular in the 1950s, did not hold up well in empirical tests. The revisionist limited effects model, exemplified by Klapper's 1960 book, on the other hand, was intuitively uncomfortable.[5] It did not seem reasonable that the potential power of the media was blocked by selectivity mechanisms and social forces when the apparent influence of the media could be seen every day. The limited effects model might be a convenient way for sociologists to dismiss mass media as a social institution not important enough for serious study, but such a view was not comfortable for most communication researchers. In a mid-1970s review and stock-taking of political communication research, Chaffee asserted that "this limited effects model is simply not believed by the authors (of the volume). The possibility that media effects on politics are only minor remains, but it is not <u>assumed</u> in this book."[6] Nor is it assumed by the dozens of researchers who have devoted their efforts to further development of the agenda-setting hypothesis.

Another reason for the popularity of the hypothesis is its methodological sophistication. Most studies use a panel design and analyze results with a cross-lagged correlation procedure, an innovative causal inference approach that allows the researchers to address the difficult question of time order in a quasi-experimental field setting. The central competing hypotheses of time order -- X $\longrightarrow$ Y vs. Y $\longrightarrow$ X -- can be addressed directly.

Another strength is the direct linking of media content with public perceptions. By matching how issues are treated in the media with comparable public perceptions of those issues at the same time and across time, researchers can measure concomitant variation directly and go a long way toward sorting out time order. While such measures are, by traditional standards, not sufficient for proof of causal linkage, they represent stronger evidence of such a relationship than most other field studies of mass media.

Properly executed agenda-setting studies are, of course, cumbersome and complex. It is a tribute to the intellectual strength of the hypothesis that so many researchers are willing to grapple with these methodological complexities in order to expand the agenda-setting frontier.

Agenda-setting researchers have fanned out in different directions, each pursuing a somewhat different extension or explication of the general thesis. Almost all, however, continue to use the original research design: Respondents in a survey are asked to rank a set of issues on the basis of their salience (usually operationalized as "importance" or "concern"); a comparable ranking of the same issues is derived from a content analysis of appropriate media; and the aggregate ranking of issues in the media is then correlated with the aggregate ranking assigned by the sample of respondents. In the cross-lagged approach, various pairs of correlations are compared with each

other and with theoretical baseline correlations to determine whether the hypothesis that the media agenda at $Time_1$ leads to personal agenda at $Time_2$ is tenable.

Purpose

A major problem with the agenda-setting methodology, which is the major thrust of our concern, is that all measures are aggregates -- averages of all respondents and for all media. While units larger than the individual may be appropriate for some kinds of social research -- the study of organizations, for example, or real collectivities -- it is difficult to justify the study of human behavior when it is done only at the aggregate level. To expand Alexander Pope's observation that the proper study of mankind is man, we suggest that the proper study of human behavior is the behavior of humans observed at the individual level.

In the context of agenda-setting methodology, this problem is manifested in several ways. The first is the number of units on which the correlations are based. While most agenda-setting studies use a sample of respondents and media content that is adequate by traditional standards, it is the issues, not the respondents or media stories, which are correlated. Most of the studies use five or six issues, and few use more than seven. The correlations, then, have an "n" of five or six or seven. These correlations may be impressively high, but still not statistically significant. For example, with an "n" of five, the Spearman rank order correlation must exceed .90 to be significant at the .05 level and must be 1.00 to be significant at .01. With an "n" of six, the critical values are .82 and .94.[7]

While it is true that the ranks are relatively stable because they are averaged across the entire sample of respondents (the final rank is generally the mean rank for the whole sample), these mean ranks do contain considerable variance and frequently do not differ significantly from one another. The problem is more serious when one ranks media content because percentage differences among categories are small. In the 1972 Charlotte study, for example, the differences between the third ranked category and sixth ranked category were in some cases as small as four percentage points. To rank "pollution" sixth with 1% of total CBS coverage and to rank "relations with China and Russia" fourth with 1.9% is to impose variance on the data that does not really exist.

Differences between individuals, of course, are lost when one works with averages. Not only does this eliminate important variance, but it also focuses research on a unit of analysis that is not necessarily appropriate. If one accepts reduction as one of the goals of science, then it is important to try to explain group behavior in terms of individual behavior. And in this case, the "group" is only a statistical average or an aggregate; it is not any psychologically or socially real collectivity. While it may be important to talk about the social effects of mass media -- their effects on groups or collectivities in society or on the structure of society itself -- the agenda-setting hypothesis has been defined at the psychological level, an effect on individuals. For the study of such effects, the appropriate unit of analysis is the individual.

In this paper, we propose to define agenda as an attribute of each individual respondent. We propose then to compare the agenda of individuals with those of various media synchronously and across time, following the

measurement model proposed in the original agenda-setting studies. We will test the hypothesis of the agenda-setting effects of media by observing whether closeness of fit between the individual's agenda and media agendas is a function of exposure to those media.

Preliminary Study

A preliminary study in the spring of 1979 was designed to test whether closeness of fit between the individual's agenda and media agendas was related to the use of those media. An availability sample (n=59) of undergraduate students in speech and journalism at the University of North Carolina at Chapel Hill filled out a questionnaire similar to those used in most other agenda-setting studies. Six broad news areas were defined:

Inflation/unemployment
Political situation in Iran
Relations between Carter and Congress
China-Vietnam conflict
Oil supply/energy shortage
U.S. relations with China and the Soviet Union

Instructions to students were:

> Below is a list of issues currently in the news. Put a "1" in front of the issue you think is most important. Then put a "2" in front of the issue you think is second most important, and so on, until you have marked all of the issues from 1 to 6.

Or the second page of the questionnaire, respondents were asked to list the newspapers, news magazines and early evening TV network news programs they read or watched regularly. For each newspaper and TV newscast, they were instructed to indicate how many days out of the last seven they had read or seen that medium. For the news magazines, they indicated how many issues out of the last five they had seen. For the seven days prior to the

exercise, we monitored two network newscasts and collected copies of the leading local newspapers. We also collected the five prior issues of Time and Newsweek. From the entire issues of the news magazines and entire newscasts and from the front pages of the daily newspapers, we constructed media agendas. The six issues were ranked for each medium according to the amount of space or time devoted to each issue. There was some variation, but as other studies have shown, one problem of agenda-setting research which tries to distinguish among media is the strong similarity of content both between and within media.

The measure for calculating the closeness of fit between each individual's agenda and the various media agendas was a simple sum of differences between the individual's agenda and the medium's agenda, squared to remove the sign differences, summed across the six issues, and factored to the -1 power:

$$\text{Closeness of fit} = \sqrt{\sum \left(\text{RANK}_{\text{Indiv}} - \text{RANK}_{\text{Medium}} \right)^2}$$

A separate measure of closeness of fit was calculated for the two television networks, CBS and NBC, two news magazines, Time and Newsweek, and three daily newspapers, the Raleigh News and Observer, the Charlotte Observer and the student Daily Tar Heel. Our original intent was to correlate the closeness of fit measure with exposure to the medium as measured by the number of issues/days the respondent was exposed to the medium. However, because of a smaller sample than anticipated and because the distributions of media exposure were highly skewed, we opted for a lower power hypothesis. Instead of asking whether the degree of agenda fit matches the level of exposure, we

hypothesized that users of the medium would have a closer agenda fit than non-users. Because a higher agenda fit score means a lower degree of similarity between the individual's agenda and the medium's agenda, the directional hypothesis was:

$$H_1: \bar{X}_{\text{Users}} < \bar{X}_{\text{Non-users}} \quad ; \quad H_0: \bar{X}_{\text{Users}} \geq \bar{X}_{\text{Non-users}}$$

Results

Results of the seven one-tailed t-tests comparing mean closeness of fit scores of users and non-users of the seven media are presented in Table 1. These results are consistent and striking: In only two of the seven tests is

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Table 1 about here

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the difference in the right direction, and those differences are non-significant. In four of the tests, the difference is non-significant but opposite the direction predicted. The one remaining test result is statistically significant but in the opposite direction of the prediction. With a directional hypothesis, this finding must be interpreted as non-significant, a failure to reject the null hypothesis of no difference between groups in the direction predicted.

Across seven specific media, including news magazines, newspapers and network television, we found no evidence that personal agendas of users of these media were any closer to the media agendas than personal agendas of non-users. In five out of the seven tests, inconclusive evidence showed that

users were less similar than non-users.

Can the problems of design validity be raised as explanations of these findings? Problems do exist in this study, of course. The sample was small, especially when users of some media are sorted out. A more important question is whether our "synchronous" sample of media content was adequate. McCombs has described the rise and fall of issue salience as similar to a normal curve. Some of these issues may have been too near the tails of the salience curve to permit a sorting out of differences between users and non-users. In agenda-setting research, it is possible that "concomitant variation" may mean a lag of a week or two.

It seemed to us unlikely, however, that this striking lack of any concomitant variation predicted by the agenda-setting hypothesis and the impressive body of empirical research could be explained by limitations in our simple research design. To test agenda-setting at the individual level further, we undertook to reexamine the data collected by McCombs and Shaw and their colleagues in 1972.

1972 Charlotte Panel Study

The 1972 study was a panel design with interviews in June and October in Charlotte, North Carolina, focusing on media use and the presidential campaign. A brief telephone interview was carried out in November after the presidential election but is not pertinent to our interests here. A total of 421 randomly selected adults was interviewed in person in June. Of these, 227 were reinterviewed in October.

In both waves, respondents were asked to assess the salience of a set of six major issues. Respondents were given 15 sets of two issues, each issue paired with every other issue, and asked to indicate "which of the two you are more concerned about." From the 15 comparisons, it was possible to rank the six issues on the basis of the number of times each had been selected as the more important.

Respondents in June were also asked several media use questions:

How much do you use a newspaper for news about political candidates and issues -- a great deal -- some -- very little -- not at all?

What newspaper is that?

How often do you read this newspaper -- only occasionally -- several times a week -- everyday/nearly everyday?

A similar set of questions measured exposure to and use of television news. In October, the questions about use of newspaper and television news were repeated. In developing the content analyses, CBS, NBC and the Charlotte Observer were used. The Observer dominates the city although an afternoon paper, the Charlotte News, published by the same company, is also available. In the sample, so few respondents cited ABC that it was dropped. In a study like this carried out in a single city, comparisons within media are limited although the data are adequate for comparisons among media.

The several authors who reported the results of the Charlotte study, on the whole, found support for the agenda-setting hypothesis. McCombs' comparison of television and newspaper differential effects using the powerful method of cross-lagged correlation is especially illustrative of the elegant marriage of theory and methodology. McCombs concludes that the data support the priorities model of agenda-setting, that is, the conclusion that the media do more than influence what becomes salient or not salient but that the media

priorities -- the relative saliences as measured by the relative amount of attention given -- are transferred largely intact to their audiences.

In our secondary analysis of the Charlotte data, we again chose to address the question of whether the evidence of agenda effect, measured at the aggregate level, could be detected at the individual level, that is, whether the closeness of fit between individual agendas and media agendas was related in any way to media exposure.

Closeness of fit scores were calculated for each respondent as described above. For each respondent, nine scores were calculated: synchronous closeness of fit scores for June and October (personal agenda in June with Observer, CBS and NBC agendas in June, personal agenda in October with Observer, CBS and NBC agendas in October) and lagged scores between June and October (personal agenda in October with Observer, CBS and NBC agendas in June). We then identified the audiences for each medium on the basis of whether respondents mentioned the Observer, CBS or NBC during the June interview.

Results of this analysis are shown in Table 2. As with our earlier study of college students, we found no difference in the closeness of fit

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Table 2 about here

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between the personal agendas and media agendas between people who were exposed to those media and people who were not. In fact, as the other study had also shown, some differences were non-significantly in the direction opposite that predicted by the agenda-setting hypothesis: in seven out of nine comparisons, people who were not exposed to the medium had personal

agendas more like that of the medium than people who were exposed.

So far, media exposure has been defined as a simple nominal variable: exposure vs. no exposure. We also wanted to pursue the question of whether different levels of exposure might be related to the closeness of fit between personal and media agendas. The Charlotte survey provides two measures that are similar but conceptually distinct. The measure of frequency of exposure to newspaper and television news is straight forward; the measure of use of media-- How much do you use a newspaper for news about political candidates and issues, etc. -- however, seems to embody a different concept. If most media exposure is routine, casual and often non-purposive, the frequency of exposure measure might not correlate with agenda fit.[8] But using a medium for information implies some degree of active participation by the individual, some level of information seeking or at least attentive, purposeful behavior. To examine this question, correlations were calculated between the various closeness of fit scores and measures of exposure and use. The frequency of use measures were asked of all respondents, and the exposure questions were asked of all respondents who said they used the medium at all. As a result, in the sample of all respondents, the correlations are based on non-readers of the Observer as well as readers, non-viewers of CBS and NBC as well as viewers. However, because 80% of the sample claimed at least some exposure to the Observer and 71% claimed exposure to either NBC or CBS, the confounding of audience and non-audience in the overall sample does not interfere seriously with the analysis.

Table 3 shows the Pearson correlations between the measures of media exposure and use and the measures of agenda fit. There is no clear pattern of

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Table 3 about here

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correlation and certainly no support for the argument of media differentiation. Closeness of fit between personal and Observer agendas is moderately correlated with most measures of exposure and use -- TV and newspaper -- but in no case does exposure or use account for more than 5% of the variance in the agenda fit score, and the direction of the correlation between use of TV in October and the fit score is opposite the agenda hypothesis prediction.

Over half of the correlations are non-significant, and only two reach .20. When this analysis is repeated with only respondents who used the specific medium (we have not reproduced these additional correlations here), most of the coefficients are in fact reduced. This is predictable, of course, because as the t-tests showed, many of the differences between users and non-users were opposite the direction predicted by the agenda-setting hypothesis. Throughout this analysis, the finding is consistently an absence of significant differences in closeness of fit between personal and media agendas between users and non-users of the medium. Beyond that, many of the differences were trivially in directions opposite those predicted by the agenda-setting hypothesis: while chance cannot be ruled out as an explanation, in most cases, people who were exposed to the Charlotte Observer, CBS or NBC had personal agendas that were less like those of the media than people who did not read or watch.

Discussion and Summary

In this paper, we have suggested that agenda-setting could profitably be treated as an attribute of the individual rather than an aggregate average or a reification of a collectivity like "the public" that does not really exist. Use of the individual as the unit of analysis has the advantage of

allowing us to analyze the dozens or hundreds of individual participants in agenda-setting research projects, not just the five or six or seven issues. If agenda-setting is more than a manifestitation of a general principle that, on the average, things rise and fall together, a transfer of media agendas to personal agendas should be detectable in those individuals who are exposed to those media.

In two studies, one a modest classroom exercise which examined network television, several daily newspapers and news magazines, the other a reanalysis of a large-scale, sophisticated panel study, we could find no evidence of such a transfer. When we considered both synchronous closeness of fit between personal and media agendas and time-lagged closeness of fit, we found that people who were exposed to specific media did not, on the whole, have personal agendas more in tune with those presented by the media than people who were not exposed to those media. Measures of use of newspapers and television for news and measures of exposure to these media did not, on the whole, correlate with measures of agenda fit, and to the extent that correlations were statistically significant, they did not differentiate among media. It was also true that many of the comparisons showed greater fit between personal and media agendas among people who were not exposed to the media than among people who were, although not much confidence can be placed in these non-significant findings.

We do not suggest that agenda-setting is an artifact of the methodology used to measure it, but we do suggest that this failure to detect evidence of agenda-setting at the level of individuals is a warning. Before the development of the theory of agenda-setting goes much farther, it is important to make certain that the evidence to date is sound. It is

important to find evidence of agenda-setting at the level of individual behavior where, after all, the aggregate behavior takes place. Lewis Thomas, surveying the explosion of scientific data, offered the modest proposal that "we defer further action until we have acquired a really complete set of information concerning at least one living thing. Then, at least, we shall be able to claim that we know what we are doing."[9] Thomas, a biologist, proposed that his fellow scientists focus their data-collection efforts on a protozoan which is found in the inner reaches of the digestive tract of Australian termites. We should be as modest and concentrate our research efforts on examining the effects of mass media on individuals. When we can demonstrate how the mass media influence what individuals think about, we will be ready for further developments in the important theory of agenda-setting.

NOTES

[1]Maxwell E. McCombs and Donald L. Shaw, "The Agenda-Setting Function of Mass Media," Public Opinion Quarterly, 36 (1972), pp. 176-87.

[2]Bernard C. Cohen, The Press and Foreign Policy, Princeton: Princeton University Press, 1963, p. 13.

[3]Theodore H. White, The Making of the President 1972, New York: Bantam, 1973, p. 327.

[4]Donald L. Shaw and Maxwell E. McCombs, The Emergence of American Political Issues: The Agenda-Setting Function of the Press, St. Paul: West Publishing Co., 1977.

[5]Joseph T. Klapper, The Effects of Mass Communication, New York: Free Press, 1960.

[6]Steven H. Chaffee, Political Communication; Issues and Strategies for Research, Los Angeles: Sage Publications, 1975, p. 19.

[7]Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, New York: McGraw-Hill Book Co., 1956, p. 284.

[8]Robert L. Stevenson, "The Uses and Non-Uses of Television News," presented to the International Society of Political Psychology," New York, NY, 1978.

[9]Lewis Thomas, The Lives of a Cell, New York: Bantam, 1974, p. 30.

Table 1: Mean Closeness of Fit Scores Between Personal and Media Agendas by Media Exposure, Chapel Hill Student Study, 1979.

Personal - News & Observer Agenda		
Readers	6.14	
Non-readers	4.60	t= -3.12, df=57, p=.001*
Personal - Charlotte Observer Agenda		
Readers	5.86	
Non-readers	4.97	t= -1.17, df=57, p=.124
Personal - Daily Tar Heel Agenda		
Readers	5.46	
Non-readers	6.40	t= 1.24, df=57, p=.110
Personal - Time Magazine Agenda		
Readers	5.93	
Non-readers	5.74	t= -0.71, df=57, p=.240
Personal - Newsweek Agenda		
Readers	6.19	
Non-readers	5.95	t= -0.95, df=57, p=.174
Personal - CBS Agenda		
Viewers	5.36	
Non-viewers	5.00	t= -0.66, df=57, p=.257
Personal - NBC Agenda		
Viewers	4.87	
Non-viewers	5.22	t= 0.51, df=57, p=.305

*One-tailed test.

Table 2: Mean Closeness of Fit Scores Between Personal and Media Agendas by Media Exposure, Charlotte Study, 1972.

	June	October	June-October Lag
Personal - Observer Agenda			
Readers	5.76	6.37	5.92
Non-readers	5.70	6.13	5.68
	t= -0.47	t= -1.42	t= -1.47
	df=378	df=265	df=265
	p=.318*	p=.079	p=.072
Personal - CBS Agenda			
Viewers	6.04	6.08	6.18
Non-viewers	6.01	5.94	6.15
	t= -0.17	t= -1.00	t= -0.19
	df=387	df=265	df=265
	p=.431	p=.158	p=.424
Personal - NBC Agenda			
Viewers	6.20	5.89	6.45
Non-viewers	6.34	5.87	6.47
	t= 1.05	t= -0.15	t= 0.09
	df=378	df=265	df=265
	p=.148	p=.442	p=.466

*One-tailed test

Table 3: Correlations Between Closeness of Fit Scores and Media Use, Charlotte Study, 1972.

Closeness of fit between personal agenda and...	Observer Agenda June	Observer Agenda October	CBS Agenda June	CBS Agenda October	NBC Agenda June	NBC Agenda October
Use newspapers (June)	.06	.19*	.04	-.01	.07	.14
Read newspapers (June)	.02	.11*	-.01	.01	.03	.11*
Use TV news (June)	.14*	.22*	.13*	-.02	.16*	.18*
Watch TV news (June)	.08	.11*	.08	.11*	.06	.10*
Use newspapers (October)	-.01	.20*	-.03	.15*	-.06	.19*
Use TV news (October)	-.07	-.13*	-.06	-.09	-.05	-.14*

*$p < .05$. Correlations are Pearson product-moment correlations.